DESIGN PANEL NO. 36 10-23-97

TIMER SERVICES - Steve Reeves

OVERVIEW

The Timer Services CSC will provide support for application access to the Coordinated Universal Time (UTC) value, and the Countdown Time (CDT) or Mission Elapsed Time (MET). The ability to set the value of the CDT/MET and place a hold on the CDT/MET will be provided.

Timer Services will also allow applications to request interrupts after a delay of a specified time, or at a specified UTC value, CDT value, or MET value. Timer Services will provide a stopwatch function.

ACTIONS	ACTIONEE	DUE DATE	STATUS
1. Present Network Timing Protocol (NTP) standards including failure modes, and return to a future design panel.	Dennis Ogelsby & John Porter		
2. What are the ramifications of multiple test sets in an OCR with respect to Count Down Time and CDT clocks a) How does CDT get published in an LCC test set? b) How many CDT clocks need to be placed in an OCR? c) What is the OPS concept for how CDT is used in an OCR with multiple test sets?	Kirk Lougheed	11-21-97	

*Approved

DESIGN PANEL NO. 36 10-23-97

SYSTEM STRESS TEST THREAD ASSESSEMENT - Emilio Valencia

OVERVIEW

This thread will evaluate the RTPS architecture to determine if the system will be able to support system load conditions. It will also serve to establish a baseline for the System Stress Test.

Included will be a support thread to demonstrate the system under several load conditions.

ACTIONS	ACTIONEE	DUE DATE	STATUS
No action required			

*Approved

DESIGN PANEL NO. 36 10-23-97

IVHM/HEDS TECHNOLOGY DEMONSTRATION (HTD) THREAD - Emilio Valencia

OVERVIEW

This Human Exploration and Development of Space (HEDS) Technology Demonstration (HTD) Thread provides the required capabilities to receive, process, display and command the HTD. The Integrated Vehicle Health Monitoring (IVHM)/HTD project is part of the Shuttle Upgrades program. An overview of the HTD is presented in the following paragraph.

The purpose of the Orbiter Vehicle Health Monitoring (VHM) HEDS Technology Demonstration (HTD) is to demonstrate competing modern, off-the-shelf sensing technologies in an operational environment to make informed design decisions for the eventual Orbiter upgrade VHM. VHM takes the instrumentation system a step further by providing capabilities to process data versus merely recording data. It is planned to fly two HTDs (HTD 1 and HTD 2) on the same Orbiter on successive flights with incorporation of additional sensors between flights. During cryogenic propellant load in terminal launch countdown, a VHM data stream will be routed out of the Orbiter's T-0 umbilical for transmission, processing and viewing in the Launch Control Center (LCC). At approximately T-5 minutes, a command will be sent to the VHM processor to begin recording data. Data will be recorded on ascent, during three planned one hour snap shot periods and on descent. The processor will be dumped to a ground system after the Orbiter has landed and has rolled into its Orbiter Processing Facility (OPF) bay.

The Backup hazardous Gas Detection System consists of a set of specialized hardware and software located in each of the mobile launchers. The system provides LPS HIM's with a very minimal set of data. The system is controlled (and more detail data is displayed) via a dumb terminal located in the CCMS control rooms. There is a project to upgrade this interface with a PC-based GUI (Labview) for command and control. This interface will provide a Shuttle Data Stream Prime to provide this data to the user community.

ACTIONS	ACTIONEE	DUE DATE	STATUS
No action required			

*Approved

DESIGN PANEL NO. 36 10-23-97

SYSTEM MESSAGE CATALOG - Jeff Wildgen

OVERVIEW

System Message Catalog is responsible for providing an environment where users can define and manage messages that are eventually displayed in the RTPS environment.

System Message Catalog provides a GUI interface that allows users to create and /or modify system messages, application messages and user application messages that will be stored in a SDC Message Catalog.

System Message Catalog also creates the SCID Message Index File from the SDC SCID Message Catalog. As part of System Load, the SCID Message Index File gets loaded on the CCWS(s) that will allow for easy and improved access of the message in the real-time RTPS environment. The SCID Message Index File will contain both system and application messages.

System Message Catalog also creates the TCID Message Index File from the SDC TCID Message Catalog for user application messages. The TCID Message Index File will become part of the TCID, and as part of the TCID Load, the TCID Message Index File gets loaded on the CCWS(s) as well.

ACTIONS	ACTIONEE	DUE DATE	STATUS
No action required			

*Approved

DESIGN PANEL NO. 36 10-23-97

SYSTEM MESSAGE SERVICES - Lynn Higgens

OVERVIEW

System Message Services is an integrated support service which provides applications the ability to send and receive system and application message packets across the network. System Message Services executes on the Gateways, CCP, DDP, CCWS(HCI), and Ops CM Server platforms. System Message Services receives messaging information from the calling application and forwards this message packet information to CCWS workstations for translation and display, in addition to logging packets to the SDC Recording Facility and the SM Master log file. System Message Services minimizes network traffic by utilizing a Central Message Repository(Online Message Catalog) that contains the encapsulated CLCS Message Catalog eliminating transmittal of the message body (i.e., actual text message). The catalog is referenced to obtain information that is associated with each message at the destination platform.

To send messages, applications call the SMS SMS_Send_System_Message API and supply a TCID or SCID parameters that uniquely identifies the index file to access in order to describe the message characteristics.

System Message Services also provides the capability to retrieve system and application messages from the SDC Recording Facility through a programmatic interface(API).

ACTIONS	ACTIONEE	DUE DATE	STATUS
No action required			

*Approved

DESIGN PANEL NO. 36 10-23-97

SYSTEM MESSAGE VIEWER - Carmen Natschka

OVERVIEW

The System Message Viewer CSC provides a Graphic User Interface (GUI) for accessing and displaying message information gathered and managed by the System Message Services CSC of the System Services CSCI. The System Message Viewer CSC is resident on the Human Computer Interface (CCW/S).

ACTIONS	ACTIONEE	DUE DATE	STATUS
No action required			

*Approved